

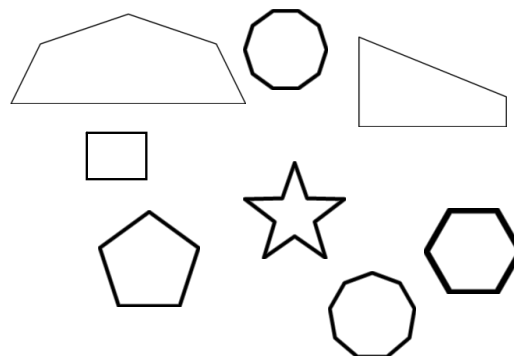
1.6 Classify Polygons

polygon--closed plane figure, whose sides are all segments

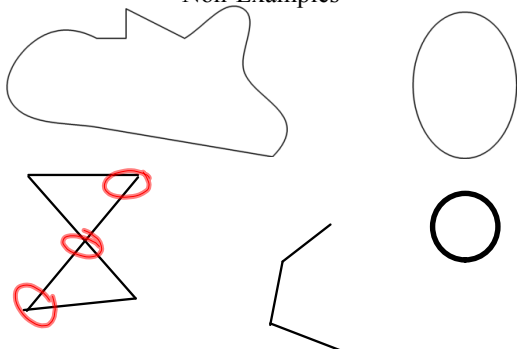
- sides have a common endpoint and are non collinear
- each side intersects exactly 2 other sides

vertex--each endpoint of a side

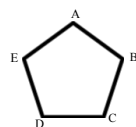
Examples



Non-Examples




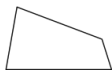


Name by the vertices, in consecutive order

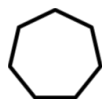
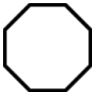




polygon DCBAE

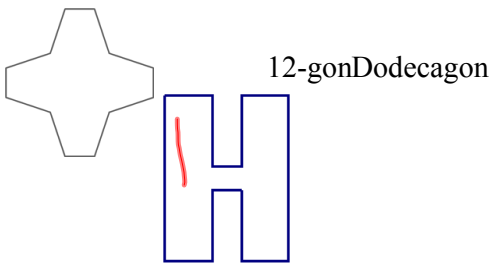
Types of Polygons

Shape# of sides Name

	3	Triangle
	4	Quadrilateral
	5	Pentagon
	6	Hexagon

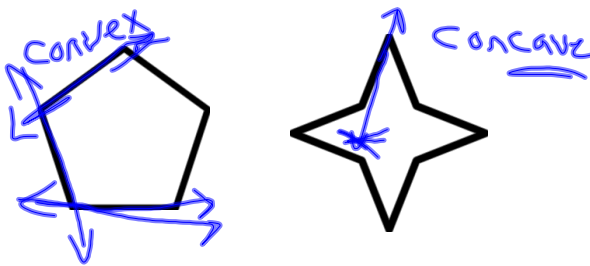
	7	Heptagon
	8	<u>Octagon</u>
	9	<u>Nonagon</u>
	10	<u>Decagon</u>

11-gon

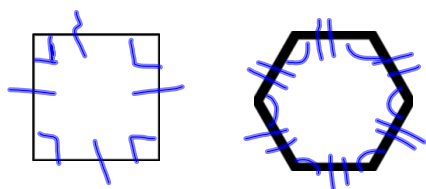


Convex--A polygon is convex, if the line containing a side does not contain points on the interior of the polygon

Concave--Not convex



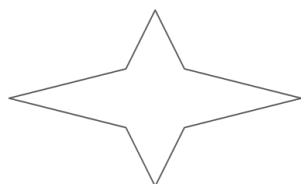
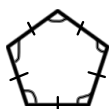
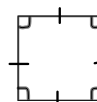
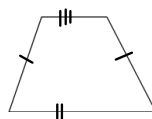
Regular Polygon--convex polygon where all of the sides are congruent, and all of the angles are congruent



equilateral--all sides are congruent
equiangular--all angles are congruent

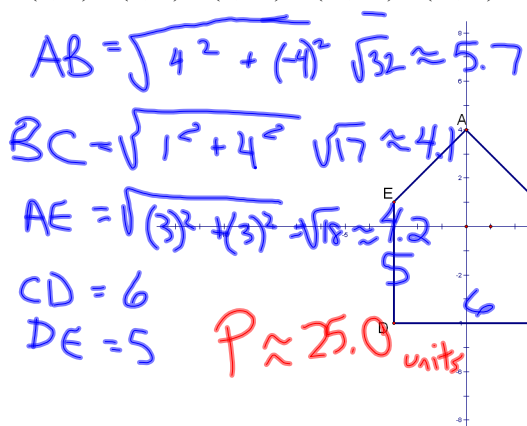
Classify the following figures as:

- polygon or not (if polygon, what type)
- convex or concave
- equilateral, equiangular, regular or none

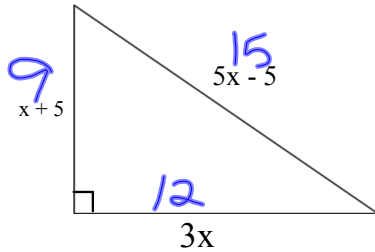


Find the perimeter of ABCDE

A(0, 4) B(4, 0) C(3, -4) D(-3, -4) E(-3, 1)



If the perimeter of the triangle below is 36 units, find the length of the sides.



$$x + 5 + 3x + 5x - 5 = 36$$

$$x = 4 \quad 9x = 36$$

HW

p44-46

#s 3-15, 18-22, 24-26, 28,
29